REMARKS

The Applicants respectfully request reconsideration of the present application based on the foregoing amendments and the following remarks.

In the above amendments, claim 11 has been amended, and new claims 24-32 have been added. The amendments are fully supported throughout the specification. Further, the amended language was previously presented or further defines language that was previously presented, and thus no new issues have been raised. Therefore, after entry of the above amendments, claims 1-32 will be pending in this application. Applicants believe that the present application is now in condition for allowance, which prompt and favorable action is respectfully requested.

Rejection of Claims 1-5 and 17-23 Under 35 USC § 103(a)

The Applicants respectfully traverse the rejection of claims 1-5 and 17-23 under 35 USC § 103(a) as being obvious over US Patent No. 6,401,160 to See et al. ("See") in view of U.S. Pub. No. 2002/0169923 to Chen ("Chen"). See and Chen, either individually or in any combination, do not disclose or suggest the features recited by these claims.

In particular, See and Chen do not disclose or suggest a method and/or system and/or a computer readable medium embodying codes for storing data in a flash memory having a code bank and a data bank, including an action and/or a means for: writing data to a code bank under control of a flash driver in a storage device external to the flash memory device; and, alternatively or in addition, where writing data to the code bank occurs when there is an expectation of insufficient space to write data to the data bank under control of a flash driver in the code bank, as recited by independent claims 1, 17 and 22. In contrast, See only discloses writing data to a data storage portion 114.[1] Further, as noted by the Examiner,[2] See does not

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[1] U.S. Patent No. 6,401,160 to See et al., col. 3, lines 46-48.
[2] Office Action mailed November 28, 2005, page 6, line 5-6.

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provide any disclosure or suggestion of a location a flash driver, and more notably does not

disclose or suggest the use of *any* flash driver, much less the recited flash drivers controlling the

recited writings.   Specifically, See discloses a nonvolative memory device 110 having a data

storage portion 114 and a code storage portion 118.[3]   Further, the method and apparatus of See

includes an "initialization process" that defines an adjustable data/code boundary between the

data storage portion 114 and the code storage portion 118.[4]   Contrary to the Examiner's

assertion,[5] however, See does not disclose or suggest writing data to the code bank under control

of a flash driver in an external storage device, as recited by the present claims.   Instead, See

discloses re-partitioning of the memory blocks within the nonvolative memory device 110 and

only writing data into the newly defined data storage portion 114.[6]   Since See only discloses

writing data to the data storage portion 114, See does not disclose or suggest writing data to the

code bank, as recited by the claims.   Further, because See fails to mention any flash driver, See

cannot disclose or suggest the recited writing to the code bank under control of an externally

located flash driver.

Alternately, or in addition, as See does not disclose or suggest any flash driver, See

cannot disclose or suggest writing data to the code bank when there is an expectation of

insufficient space to write data to the data bank under control of a flash driver in the code bank,

as recited by the claims.

The addition of Chen does not solve the deficiencies of See, as Chen does not disclose or

suggest writing data to a code bank, and more particularly, as Chen teaches away from writing

data to a data bank under control of a flash driver in the code bank, as recited by the claims.   In

particular, Chen discloses a microcomputer 100 having a flash memory 126 including a flash

memory driver 132 and a data file 136 on a first chip 116, and a memory 124 on a second chip

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[3] See at col. 3, lines 14-20.
[4] *Id.* at col. 8, lines 36-52.

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114 external to the first chip 116, and hence external to flash memory 126.[7] In contrast to the recited action and/or means for writing to the code bank or the data bank, Chen discloses writing data *only* to the data file 136.[8] Since Chen only discloses writing data to the data file 136, Chen cannot disclose writing data to the code bank, as recited by the claims.

Further, Chen states that flash memory has a limitation in that a flash driver located on the flash memory cannot be executed to write data to the flash memory, and makes it clear that "[T]his, of course, cannot be permitted."[9] Based on this limitation, Chen *requires* the writing of data to the data file 136 to occur under control of a copy of flash driver 132 in external memory 124.[10] Thus, since Chen requires writing to occur under control of the external flash driver, Chen teaches away from writing data to a data bank on the flash memory device under control of a flash driver in the code bank on the flash memory device, as recited by the present claims.

Thus, See and Chen do not disclose or suggest writing data to a code bank, and as a result they cannot disclose or suggest writing data to the code bank occurs when there is an expectation of insufficient space to write data to the data bank under control of a flash driver in the code bank, as recited by the claims.

Additionally, depending claims 2-5, 18-21 and 23 are allowable for the same reasons as discussed above. Further, each of these claims recites additional features not disclosed or suggested by any proper combination of See and Chen. For example, referring to claims 4 and 20, See and Chen do not disclose or suggest, and in fact teach away from, a method and/or system including having copies of the flash driver in both the RAM and the code bank. Additionally, for example, referring to claims 5 and 21, See and Chen do not disclose or suggest

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[5] Office Action, page 6, lines 1-4.
[6] See at col. 11, generally lines 3-39, and specifically lines 3-4 and 30-31; and Fig. 8d.
[7] U.S. Pub. No. 2002/0169923 to Chen, page 2, paragraph 15, lines 1-13.
[8] *Id.* at page 2, paragraph 16, lines 17-24.
[9] *Id.* at page 1, paragraph 4, lines 20-29, especially lines 28-29.
[10] *Id.* at page 2, paragraph 16, lines 24-37.

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a method and/or system including preventing the flash driver from accessing code in the code bank when performing operations on the flash memory device.

Therefore, based on the above remarks, the Applicants respectfully request that the Examiner withdraw the rejection of claims 1-5 and 17-23 under 35 USC § 103(a) as being obvious over See in view of Chen.

Rejection of Claims 6-16 Under 35 USC § 103(a)

The Applicants respectfully traverse the rejection of claims 6-16 under 35 USC § 103(a) as being obvious over US Pub. No. 2002/0169923 to Chen ("Chen") in view of "admitted prior art" in Applicants' Background section. Chen and the "admitted prior art," either individually or in any combination, do not disclose or suggest the features recited by these claims.

In particular, Chen and the "admitted prior art" do not disclose or suggest at least the combination of at least one read-while-write flash memory device, and at least one flash driver controlling operation of the flash memory device, the flash driver being executable from or instantiated in the RAM, as recited in independent claims 6 and 11.

In contrast, Chen discloses a flash memory that cannot be read during write operations.[11] There is no disclosure or suggestion in Chen of a flash memory having read-while-write capability. Further, Chen teaches away from a read-while-write flash memory by clearly stating that it is undesirable to execute a flash driver located on the flash memory during write operations on the flash memory.[12]

Additionally, the Examiner has not yet set forth a *prima facie* case of obviousness. The PTO has the burden under §103 to establish a *prima facie* case of obviousness.[13] Both the case law of the Federal Circuit and the PTO itself have made clear that where a modification must be

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[11] Chen at page 1, paragraph 8, lines 5-9.
[12] *Id.* at page 1, paragraph 4, lines 20-29, especially lines 28-29.

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made to the prior art to reject or invalidate a claim under § 103, there must be a showing of proper

motivation to do so. The mere fact that a prior art reference could arguably be modified to meet

the claim is insufficient to establish obviousness. The PTO can satisfy this burden only by

showing some objective teaching in the prior art or that knowledge generally available to one of

ordinary skill in the art would lead that individual to combine the relevant teachings of the

references.[14] In order to establish obviousness, there must be a suggestion or motivation in the

reference to do so.[15]

In this instance, the "admitted prior art" cannot be properly combined with Chen in a 35

USC § 103 rejection, as Chen explicitly teaches NOT to execute a flash driver located on the

flash memory during write operations on the flash memory, as noted above, while the "admitted

prior art" explicitly discloses utilizing a flash driver on the flash memory to write to the flash

memory in order to provide a robust, read-while-write flash memory device, as noted by the

Examiner. Thus, if any suggestion or motivation exists in these two references, the suggestion is

to NOT combine flash memory aspect of the references.

Further, even if the combination of the two reference could be properly made, the

addition of the "admitted prior art" to Chen does not result in the claimed invention. The

"admitted prior art" discloses a flash memory that utilizes a flash driver in a code bank to

facilitate the read-while-write functionality by writing data to a data bank of the flash memory.[16]

This configuration solves the prior problem of not being able to read a local flash driver while

writing data locally to the flash memory. As such, in contrast to the teaching alleged by the

Examiner,[17] the "achieving greater system robustness" portion of the "admitted prior art" teaches

eliminating the need for an external flash driver when writing to the flash memory, thereby

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[13] *In re Fine*, 5 U.S.P.Q.2nd 1596, 1598 (Fed. Cir. 1988).
[14] *Id.*
[15] *See also In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (prior art could not be turned upside down without motivation to do so); *In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1998); *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999); *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002).

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providing the flash memory device with the robustness of its simultaneous "read-while-write" capability. Thus, the "admitted prior art" teaches that a flash driver external to the flash memory is NOT desired, as the flash driver in the code bank of the flash memory can be read simultaneously while writing in the data bank of the flash memory. The modification proposed by the Examiner, i.e. "modifying the flash memory of Chen to use the read-while-write flash memory [of the "admitted prior art"] to achieve greater system robustness," therefore would result in a flash memory device with read-while-write capability provided by a flash driver located in a code bank on the flash memory device. There is no motivation or suggestion in the references for such a combination to include the recited external flash driver, as the external flash driver in this combination is eliminated to achieve the robust, simultaneous read-while-write capability. Thus, the proposed combination does not form the recited invention.

Further, since the modification of using a read-while-write flash memory device does not include, and actually teaches away from, utilizing an external flash driver, the only manner in which this combination of the two references would include this recited feature would be through impermissible hindsight.

Thus, these references cannot be properly combined, and such a combination does not suggest, but teaches away from, the invention as claimed. Therefore, only the use of impermissible hindsight has allowed the Examiner to make such a combination.

Additionally, depending claims 6-10 and 12-16 are allowable for the same reasons as discussed above. Further, each of these claims recites additional features not disclosed or suggested by any proper combination of Chen and the "admitted prior art." For example, referring to claims 7 and 16, Chen and the "admitted prior art" do not disclose or suggest a device wherein the flash driver is prevented from accessing code in the code bank at least when

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[16] Application, paragraph 3.
[17] Office Action, page 3, paragraph #5.

performing operations on the flash memory device. Additionally, for example, referring to claim 12, Chen and the "admitted prior art" do not disclose or suggest a device having the features of claim 11 wherein the flash memory includes at least a code bank and a data bank. Further, for example, referring to claim 13, Chen and the "admitted prior art" do not disclose or suggest a device having the features of claim 11 wherein the processor accesses a flash driver in the RAM to write program data to the code bank.

Therefore, based on the above remarks, the Applicants respectfully request that the Examiner withdraw the rejection of claims 6-16 under 35 USC § 103(a) as being obvious over Chen in view of the "admitted prior art."

New Claims 24-32

The Applicants have added new claims 24-32 to recite subject matter to which they are entitled. These new claims are fully supported throughout the specification. No new matter has been added, and no new issues have been added as these claims include subject matter either previously presented or that further defines previously presented subject matter.

Additionally, new claims 24-32 define over the cited references, and thus are allowable. In particular, claims 24-26 depend from claim 1, and thus define over the cited references as discussed above. Further, referring to claims 27 and 28, for at least reasons similar to those discussed above, there is no combination of the cited references that discloses or suggests a wireless communication device comprising: a processor; a flash memory device comprising a code bank and a data bank, wherein the code bank comprises a local copy of a flash driver operable to be accessed by the processor to perform operations on the data bank; and a storage device, external from the flash memory device, comprising an external copy of the flash driver operable to be accessed by the processor to store data in the code bank. Similarly, referring to claims 29-32, for at least reasons similar to those discussed above, there is no combination of the

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cited references that discloses or suggests a method for storing data in a read-while-write flash memory device having a code bank and a data bank, comprising: determining if space is expected to exist in the code bank in which to write application data; mapping a flash driver to a storage device external from the flash memory device if the space is expected to exist in the code bank, and writing at least a portion of the application data to the code bank under control of the flash driver in the storage device; and mapping a flash driver to the code bank on the flash memory device if the space is not expected to exist in the code bank, and writing the application data to the data bank under control of the flash driver in the code bank.

Therefore, the Applicants respectfully request that the Examiner allow new claims 24-32.

CONCLUSION

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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